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Nomenclatural Changes in *Leptochloa* P. Beauvois Sensu Lato (Poaceae, Chloridoideae)

Neil Snow

Washington University, Department of Biology, P.O. Box 1137,
St. Louis, Missouri 63130, U.S.A. and

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166, U.S.A.

Current Address: Queensland Herbarium, Meiers Road, Indooroopilly, QLD 4068, Australia

Email: Neil.Snow@env.qld.gov.au

ABSTRACT. The following new names are proposed for *Leptochloa* P. Beauvois s.l. (including *Diplachne* P. Beauvois), based on recent revisionary and cladistic studies: *Leptochloa caudata*, *L. decipiens* subsp. *asthenes*, *L. decipiens* subsp. *peacockii*, *L. eleusine*, *L. fusca* subsp. *muelleri*, *L. fusca* subsp. *fascicularis*, *L. fusca* subsp. *uninervia*, *L. gigantea*, and *L. panicea* subsp. *brachiata*.

Recent revisionary and cladistic studies in *Leptochloa* P. Beauvois (Snow, 1997a), along with preparation of the grass treatment for *Flora Zambesiaca* (Cope, in press), support nomenclatural changes for this nearly worldwide grass genus. The changes are necessary given the consistent lack of cladistic support for *Diplachne* P. Beauvois as a taxon distinct from *Leptochloa* (Snow, 1997a) and the need to reduce in rank several species (Snow, 1997a, 1997b).

The synonymy of *Leptochloa* is extensive and only recently has been assessed from a global perspective (Snow, 1997a). However, since the primary purpose of this article is to make these new names available, complete synonymy will be withheld for a later publication (or see Snow, 1997a). In addition to these changes, descriptions of two new species are forthcoming (Snow, 1998; Snow & Simon, 1997).

Leptochloa caudata (K. Schumann) N. Snow, comb. nov. Basionym: *Diplachne caudata* K. Schumann, in Engler, Pflanzenw. Ost.-Afrikas C: 113. 1895. TYPE: Tanzania. Ukeru, *Fischer 674* (holotype, B).

Leptochloa decipiens (R. Brown) Stapf ex Maiden subsp. ***asthenes*** (Roemer & Schultes) N. Snow, comb. et stat. nov. Basionym: *Poa asthenes* Roemer & Schultes, Syst. Veg. 2: 574. 1817. *Poa imbecilla* R. Brown, Prodr. 181. 1810, nom. hom. illeg., non *P. imbecilla* Solander ex Sprengel, Pl. Nov. Herb. Spreng., 9 no. 14. 1807. *Leptochloa asthenes* (Roemer & Schultes) C. E. Hubbard, Bull. Misc. Inform. Kew: 26. 1941. TYPE: Australia. Queensland, Upper Head [=Chadron Point], Broad Sound, R. Brown 6270 (lectotype, here designated, BM; isolectotype, K). Blake (1972: 6) correctly cited the type collection but did not designate a particular duplicate as the type specimen.

Eragrostis ciliolata Jedwabnick, Bot. Arch. 5(3–4): 192. 1924. *Leptochloa ciliolata* (Jedwabnick) S. T. Blake, Contr. Queensland Herb. 14: 6. 1092. TYPE: Australia. New South Wales, Narrabri, *Maiden s.n.* (lectotype [as holotype by Lazarides, 1980: 262], B; isolectotype, BRI).

My dissertation indicated that “*Eragrostis imbecilla* Benth. Fl. Austral. 7: 643. 1878, non *E. imbecilla* (R. Brown) R. Brown ex Steudel, Syn. Pl. Glumac. 1: 279. 1854” was a taxonomic synonym of *Leptochloa decipiens* subsp. *asthenes* (Snow, 1997a: 166). A few additional comments are useful at this time. Given the format used by Bentham (1878) in volume 7 of *Flora Australiensis*, *Eragrostis imbecilla* appears to be merely a new combination, not a new taxon (e.g., see Article 58.3, Greuter et al., 1994). This is evident from his citation of *Poa imbecilla* and explicit reference to the type specimen collected by Forster in New Zealand (holotype, B, Willdenow Herbarium Cat. No. 01896, microfiche). The correct citations for these names appear to be *Eragrostis imbecilla* (Solander ex

Sprengel) Benthams, which was based on *Poa imbecilla* Solander ex Sprengel (Veldkamp, pers. comm.; see also Hiepko, 1969; Garnock-Jones, 1986). The paniculate inflorescence of the type of *P. imbecilla* Solander ex Sprengel precludes its inclusion in *Leptochloa*, as does its origin from New Zealand, which lies beyond the normal range of the genus (Snow, 1997a). Although the clarity of the microfiche was inadequate for me to suggest the proper generic placement of the Forster collection, it clearly is not *Leptochloa*, and Blake (1972: 6) has ascribed the specimen back to *Poa*. Most importantly, names based on *Poa imbecilla* Solander ex Sprengel, including *Eragrostis imbecilla* Benthams, *Leptochloa debilis* Stapf ex C. E. Hubbard (Hubbard, 1941: 26), and *Poa sprengleii* Kunth (Kunth, 1833: 363) are to be excluded from *Leptochloa* (contra Snow, 1997a; Lazarides, 1997). It should be noted, however, that Hubbard (1941) considered *Eragrostis imbecilla* Benthams as a new taxon, not merely a new combination.

Leptochloa decipiens subsp. *asthenes* was formerly recognized at the species level as *Leptochloa ciliolata* (Lazarides, 1980; Stanley & Ross, 1989; Simon, 1993). Although it can be locally distinct in the field, all characters intergrade to some extent with *L. decipiens* subsp. *decipiens* (Snow, 1997a, 1997b).

Leptochloa decipiens* subsp. *peacockii (Maiden & Betche) N. Snow, comb. et stat. nov. Basionym: *Diplachne peacockii* Maiden & Betche, Agric. Gaz. New South Wales 15: 925. 1904. *Leptochloa peacockii* (Maiden & Betche) Domin, Biblioth. Bot. 85: 379. 1915. TYPE: Australia. New South Wales: Coolabah, 4 Dec. 1904, Maiden & Boorman s.n. (lectotype [as holotype by Lazarides], 1980: 263), NSW; isoelectotypes, BM, BRI, K, W). As correctly noted by Blake (1972: 9), plate 2 in the original protologue is an erroneous element (Maiden & Betche, 1904), and represents the American species *Leptochloa dubia* Kunth.

This taxon has been recognized as *L. peacockii* (Stanley & Ross, 1989; Simon, 1993) or synonymized under *L. decipiens* subsp. *decipiens* (Lazarides, 1980). Like the previous taxon, some populations are distinct from *L. decipiens* subsp. *decipiens*, but in others morphological intergradation is continuous, such that no character or combination thereof can consistently diagnose it as a distinct species.

Leptochloa eleusine (Nees) T. A. Cope & N. Snow, comb. nov. Basionym: *Diplachne eleusine* Nees, Fl. Afr. Austr. 255. 1841. *Triodia eleusine* (Nees) T. Durrant & Schinz, Consp. Fl. Afr. 5: 877. 1894. *Uralespis eleusine* (Nees) Steudel, Syn. Pl. Glumac. 1: 248. 1854. TYPE: South Africa. Katrivierspoort, Drège 3906 (lectotype, here designated, B; isoelectotype, P).

Leptochloa fusca* (L.) Kunth subsp. *muelleri (Benthams) N. Snow, comb. et stat. nov. Basionym: *Diplachne muelleri* Benthams, Fl. Austral. 7: 619. 1878. *Leptochloa muelleri* (Benthams) Stace, Watsonia 18: 413. 1991. TYPE: Australia. Charlotte waters, Giles s.n., Herb. Munro (lectotype, here designated, K; isoelectotype, K).

Despite priority of the epithet *Leptochloa malabarica* (L.) Veldkamp over *fusca* (L.) Kunth (Veldkamp, 1971), Snow and Davidse (1998) have proposed rejection of *Poa malabarica* in the spirit of the Tokyo Code, which encourages maintenance of names in current use. This seems appropriate, given the nearly global geographic range of the species, the nearly universal historical usage of the epithet *fusca*, the restricted usage of the epithet *malabarica*, and the considerable confusion that has surrounded the application of the epithet *malabarica*.

The reduction in rank of this taxon and the two that follow is based on examination of several thousand herbarium specimens (representing over 50 herbaria) of this species complex from throughout its range, coupled with fieldwork in North America, southern Africa, and Australia, as well as multivariate statistical analyses of eleven population samples (Snow, in prep.).

Leptochloa fusca* (L.) Kunth subsp. *fascicularis (Lamarck) N. Snow, comb. et stat. nov. Basionym: *Festuca fascicularis* Lamarck, Tabl. Encycl. 1: 189. 1791. *Diplachne fascicularis* (Lamarck) P. Beauvois, Ess. Agrostogr. 81, 160, pl. 16, f. 9. 1812. *Cynodon fascicularis* (Lamarck) Raspail, Ann. Sci. Nat., Bot. 5: 303. 1825. *Festuca aquatica* Bosc ex Roemer & Schultes, Syst. Veg. 2: 615. 1817, nom. inval., as syn. of *Diplachne fascicularis* P. Beauvois. *Diplachne aquatica* Bosc ex Roemer & Schultes, Syst. Veg. 2: 615. 1817. TYPE: South America. D. Richard s.n. (holotype, P).

Leptochloa fusca* (L.) Kunth subsp. *uninervia (J. Presl) N. Snow, comb. et stat. nov. Basionym: *Megastachya uninervia* J. Presl, Reliq. Haenk. 1: 283. 1830. *Poa uninervia* (J. Presl) Kunth, Enum. Pl. 1: 344. 1833. *Eragrostis uninervia* (J. Presl) Steudel, Syn. Pl. Glumac. 1: 278. 1854. *Brizopyrum uninervium* (J. Presl) E. Fournier, Mex. Pl. 2: 121. 1886. *Leptochloa uninervia* (J. Presl) Hitchcock & Chase, Contr. U.S. Natl. Herb. 18(7): 383. 1917. *Diplachne uninervia* (J. Presl) Parodi, Revista Centro Estud. Agron. 18: 147. 1925. TYPE: Mexico. *Haenke 101* (lectotype, here designated, PR not seen; isoelectotypes, W, LE not seen).

***Leptochloa gigantea* (Launert) T. A. Cope & N. Snow**, comb. nov. Basionym: *Diplachne gigantea* Launert, Bol. Soc. Broteriana ser. 2a, 47: 349. 1974. TYPE: Zambia: Mbala (Abercorn), *Vesey-Fitzgerald 1551* (holotype, K; isotypes BM, SRGH not seen).

Leptochloa panicea* (Retzius) Ohwi subsp. *brachiata (Steudel) N. Snow, comb. et stat. nov. Basionym: *Leptochloa brachiata* Steudel, Syn. Pl. Glumac., 209. 1854. TYPE: Guadaloupe. *Duchassaing s.n.* (holotype, P, fragment US).

As recognized by Snow (1997a), *Leptochloa panicea* sensu lato is a polymorphic species that ranges throughout much of the warm temperate and tropical regions of the world. It is comprised of three subspecies.

Leptochloa panicea subsp. *panicea*, as recognized by Snow (1997a), corresponds closely to the taxon of the same name as recognized by Nowack (1994). It is an Old World taxon occurring mostly in Africa and southern Asia, but which has been verified recently from several duplicates collected at a site in northwestern Queensland, Australia (Snow, 1997a; Snow & Simon, in press).

Leptochloa panicea subsp. *brachiata*, as recognized by Snow (1997a), is by far the more common of the two New World subspecies in this complex and has a considerably larger range. It recently has been known as *L. filiformis* (Lamarck) P. Beauvois, *L. mucronata* (Snow & Davidse, 1993), and *L. panicea* subsp. *mucronata* (Michaux) Nowack (pro parte) (Snow & Davidse, 1993; Nowack 1994, 1995).

Leptochloa panicea subsp. *mucronata*, sensu Snow (1997a), is the correct name for the taxon formerly known as *Leptochloa attenuata* (Nuttall) Steudel (Allen, 1980) or *L. filiformis* var. *attenuata* (Nuttall) Steyermark & Kucera (Steyermark, 1963). This taxon is restricted to the U.S.A. in the central

and lower portions of the Mississippi River drainage and portions of the Ohio River drainage to the east. The application herein of *L. panicea* subsp. *mucronata* (and Snow, 1997a) is in a narrower sense than that of Nowack (1994, 1995), who included all New World specimens under this name.

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